



Fermilab

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Accelerator Division/Electron Cooling

April 20, 2004

MEMO TO: Distribution

FROM: Jerry Leibfritz
Project Manager

SUBJECT: **MARCH MONTHLY REPORT**
MI-31
FESS/Engineering Project No. 6-6-44

Please find attached the March 2004 monthly report for this project.

Enclosure

Distribution:

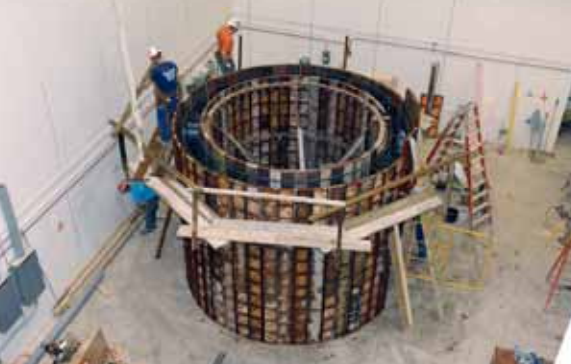
- P. Philp/MS 118
- M. Witherell/MS 105
- K. Stanfield/ MS 105
- S. Holmes/MS 105
- E. Temple/ MS 200
- J. Brown/MS 200
- H. Dick/ MS 306
- D. Carlson/MS 211
- C. Trimby/MS 212
- D. Nevin/MS 214
- E. Crumpley/MS 214
- S. Nagaitsev/ MS 307
- J. Sims/MS 214
- T. Prosapio/MS 214
- J. Spalding/MS 341
- R. Stefanski/MS 122
- Project File 6-6-44
- Chrono File

REPORTING PERIOD: March 2004

I. PROGRESS

1.1 General Construction

- a. Activity – Primary work activities included pelletron base construction, mezzanine structural steel installation, equipment lift installation, electrical terminations, crane load testing, grading and general clean up of the site.
- b. Cumulative hours worked – approximately 18,000 hours through 3/31/04.
- c. Subcontractor's schedule evaluation – As of 3/31/04 the Subcontractor is on schedule to meet the project completion of 5/6/04. There was no pay update this month. See attached reports and section II of this report for an earned value analysis. The main Subcontract is approximately 94% by earned value complete as of 3/31/04.
- d. Engineering Change Proposals/ Requests – See latest ECP list on Website. Supplemental Agreement numbers 1 through 8 have been incorporated into the Subcontract. At this time the total subcontract amount is \$2,762,293 and the completion date is 05/06/04.
- e. Upcoming issues – mezzanine construction, fire detection system installation, equipment lift commissioning, duct work, HVAC, suspended ceiling and floor tile.
- f. Photographs:



1.2 Project Support

- a. Efforts this month were spent on review of submittals, field supervision and construction administration related activities.

SCHEDULE INFORMATION AND MILESTONES:

MILESTONE	DEFINITION	BASELINE	PEP Dates	Latest Estimates
Start Project	Directive signed	30 May 02	30 May 02	26 Jun 02 (actual)
T2 Design Complete	Contract documents submitted for procurement	15 Jan 03	15 Aug 02	15 Nov 02 (actual)
Begin Construction	Notice To Proceed Issued – Switch work	27 Jun 03	21 Nov 02	17 Jan 03 (actual)
Construction Complete	Final acceptance of all work	9 Jun 04	9 Dec 03	6 May 04
Project Complete	Project closed	30 Nov 04	10 Dec 03	20 Jun 04

**II. Overall Project Cost Summary and Earned Value Analysis:**

		ORIGINAL BASELINE PROJECT COSTS (2001 dollars)		Latest Estimated Cost*	
1.1 General Construction		\$3,047,000		\$3,133,720	
1.1.1	Construction W / 18% OHP		\$2,323,000		\$2,945,433
1.1.2	Construction Contingency	22%	\$511,000		\$79,188 3%
1.1.3	Construction G & A		\$83,000		\$109,099
1.1.4	Escalation (4.6%)	4.6%	\$130,000		\$0
1.2 Project Support		\$763,000		\$676,280	
1.2.1	Project Engineering		\$465,000		\$520,000
1.2.2	Project Support Contingency	21%	\$99,000		\$14,280 3%
1.2.3	Project Support G & A		\$166,000		\$142,000
1.2.4	Escalation (4.6%)		\$33,000		\$0
Total Project Cost		\$3,810,000		\$3,810,000	

*NOTE THAT 1.1 AND 1.2 HAVE BEEN REDISTRIBUTED (2/21/03) TO REFLECT USE OF MUCH OF THE ESCALATION, ACTUAL FIXED PRICE CONSTRUCTION COSTS, AND A HIGHER CONTINGENCY. Includes Supplemental Agreements 1, through 8 and all T&M actual costs to date.

TPC Earned Value Analysis as of March 31, 2004 (based on earned value reports for March 2004):

1. The Schedule Variance is \$423,238. (high because we did not have an update with Whittaker this month)
2. The Cost Variance is \$29,489



ATTACHMENTS

See MI-31 website

<http://www-ap.fnal.gov/ecool/internal.html>

for the following:

TSR Report for 3-04

Earned Value Reports - Cost Reports and Graphs up to 3-04

Engineering Change Proposal List

More Photographs

Task Summary Report by Expenditure Type ("TSR")

[Enter Another Query](#)
Fermilab Business Services

Period End: MAR-04

Report on tasks: 1 1

A0201 - MI31 Ecooling Bldg

1 - MI31 Ecooling Bldg
Service Type: PL-EXST PRGM
SUPP-AIP

	Curr Month Costs	Curr YTD Costs	Curr YTD Obligations	Inception to Date Obligations	Inception to Date Costs	Reqs. in Process	Open Commitments
<u>Personnel Costs</u>							
FRINGE BENEFITS	0.00	862.31	862.31	3,053.37	3,053.37	0.00	0.00
OPTO ALLOC-MONTHLY	0.00	150.00	150.00	855.05	855.05	0.00	0.00
OPTO ALLOC-WEEKLY	0.00	0.00	0.00	79.14	79.14	0.00	0.00
OVERTIME	0.00	76.06	76.06	180.15	180.15	0.00	0.00
TIME WORKED -MONTHLY	0.00	2,307.81	2,307.81	11,207.05	11,207.05	0.00	0.00
TIME WORKED -WEEKLY	0.00	0.00	0.00	15.93	15.93	0.00	0.00
VAC EARNED ALLOC-MONTHLY	0.00	253.85	253.85	1,434.10	1,434.10	0.00	0.00
VAC EARNED ALLOC-WEEKLY	0.00	0.00	0.00	94.91	94.91	0.00	0.00
Personnel Costs	0.00	3,650.03	3,650.03	16,919.70	16,919.70	0.00	0.00

Materials & Services

CONSTRUCTION ENGINEERING	18,177.00	119,939.00	119,939.00	371,184.00	371,184.00	0.00	0.00
EXEMPT - CIVIL CONSTR.	493,795.00	1,054,624.00	1,181,381.00	2,363,867.00	2,237,110.00	7,944.00	126,757.00
EXEMPT - CIVIL CONSTRUCTION	-493,795.00	49,044.00	-1,054,624.00	398,426.00	49,044.00	0.00	349,382.00
FEES	0.00	0.00	0.00	500.00	500.00	0.00	0.00
FREIGHT	295.38	525.76	525.76	531.33	531.33	0.00	0.00
MACHINE SHOP	0.00	110.00	110.00	110.00	110.00	0.00	0.00
MATERIAL PURCHASES	18,323.56	37,152.06	61,822.06	82,283.77	57,613.77	0.00	24,670.00
PHOTO/GRAPHIC SERVICES	33.50	125.50	125.50	203.50	203.50	0.00	0.00
STORES ISSUES	0.00	0.00	0.00	640.42	640.42	0.00	0.00
SUB-CONTRACT SERVICES	2,102.02	5,395.53	10,218.80	118,869.03	109,115.72	0.00	9,753.31
T&M CONSTRUCTION SVCS.	0.00	0.00	0.00	8,678.12	8,678.12	0.00	0.00

1 - MI31 Ecooling Bldg
Service Type: PL-EXST PRGM
SUPP-AIP
Materials & Services

	Curr Month Costs	Curr YTD Costs	Curr YTD Obligations	Inception to Date Obligations	Inception to Date Costs	Reqs. in Process	Open Commitments
T&M ELECTRICAL SERVICES	0.00	0.00	0.00	12,966.11	12,966.11	0.00	0.00
T&M PIPE FITTERS	0.00	0.00	0.00	2,050.86	2,050.86	0.00	0.00
T&M RIGGING SERVICES	0.00	19,424.12	-16,454.16	64,829.68	64,829.68	0.00	0.00
TRAVEL, DOMESTIC-LAB EMPLOYEE	0.00	95.13	95.13	95.13	95.13	0.00	0.00
Materials & Services	38,931.46	1,286,435.10	303,139.09	3,425,234.95	2,914,672.64	7,944.00	510,562.31
<u>Indirect Cost</u>							
CSS ALLOCATION	3,362.75	22,884.35	22,884.35	71,023.98	71,023.98	0.00	0.00
G&A ALLOCATION	3.35	22.06	22.06	62,297.72	62,297.72	0.00	0.00
G&A ALLOCATION-CSS PORTION	2,153.97	14,658.38	14,658.38	40,215.07	40,215.07	0.00	0.00
G&A ALLOCATION-M&S PORTION	2,186.08	6,593.53	6,593.53	22,796.57	22,796.57	0.00	0.00
MSA ALLOCATION	1,139.66	3,437.38	3,437.38	43,179.64	43,179.64	0.00	0.00
Indirect Cost	8,845.81	47,595.70	47,595.70	239,512.98	239,512.98	0.00	0.00
1 - MI31 Ecooling Bldg SUBTOTAL:	47,777.27	1,337,680.83	354,384.82	3,681,667.63	3,171,105.32	7,944.00	510,562.31
DIST. TO ACCOUNTS REC'BL:	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UNDISTRIBUTED BALANCE:	47,777.27	1,337,680.83	354,384.82	3,681,667.63	3,171,105.32	7,944.00	510,562.31

Period End: MAR-04

Report on tasks: 1 1

<u>REPORT TOTALS</u>							
TOTAL PROJECT/TASK:	47,777.27	1,337,680.83	354,384.82	3,681,667.63	3,171,105.32	7,944.00	510,562.31
TOTAL DIST. ACCTS REC'BL:	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL UNDIST BALANCE:	47,777.27	1,337,680.83	354,384.82	3,681,667.63	3,171,105.32	7,944.00	510,562.31

BCWP
MI-31 Spending Profile
WBS 1.1 and 1.2

[illegible]

WBS 1. 2 Escalation and Contingency

Total for WBS 1.2 =	\$676,280	
Total Direct and G&A (above)=	\$600,098 *	
Project Support Escalation =	\$0	
Project Support Contingency =	\$76,182	16%

** NOTE BUDGETED COST OF WORK PERFORMED IS BASED ON WHITTAKERS LATEST T3 COST LOADED SCHEDULE.

WBS 1.1 Escalation and Contingency

Total for WBS 1.1 =	\$3,133,720	
Total Direct and G&A (above)=	\$2,489,424 *	
Project Support Escalation =	\$0	
Construction Contingency =	\$644,296	27%

Total Indirect=	\$131,061
Total Direct =	\$469,037

Total Indirect=	\$105,410
Total Direct =	\$2,384,015

ACWP
MI-31 Actual Spending Profile
WBS 1.1 and 1.2

F Y O 2	Title Source Type	WBS 1.2 Project Support												WBS 1.1 Construction																				
		ED&I				A				Monthly Totals	Cumulative Totals	Subcontract	Subcontract	Subcontract	Subcontract	Switch conduit	Switch conduit	Transformer Purchase	Transformer Purchase	Cable Tray	Cable Tray Cabling	Cabling	Chiller	Chiller	Shielding Steel Fab	Shielding Steel Fab	Shielding Steel Inst.	Shielding Steel Inst.	Monthly Totals	Cumulative Totals				
		T2 Hanson Direct	T2 Hanson G&A	T2 FESS Chargeback	T2 FESS G&A	T3 FESS M&S Direct	T3 FESS M&S G&A	T3 FESS Chargeback	T3 FESS G&A			T3 FESS Chargeback G&A	T3 FESS G&A	T3 PM Salary TX	T3 PM G&A	T3 Whittaker Direct**	T3 Whittaker G&A	T3 Whittaker Incentive	T3 Whittaker G&A	T3 T&M Direct	T3 T&M G&A	T3 Procurement Direct	T3 Procurement G&A	T3 T&M Direct	T3 T&M G&A	T3 T&M Direct	T3 T&M G&A	T3 Procurement Direct			T3 Procurement G&A	T3 T&M Direct	T3 T&M G&A	T3 T&M Direct
	Mo-Yr																																	
> U L	Jul-02			\$8,512	\$2,477	\$304	\$52					\$967	\$290	\$11,345	\$11,345																			
	Aug-02	\$41,283	\$7,018	\$12,736	\$3,550						\$967	\$290	\$65,844	\$77,189																				
	Sep-02	\$28,350	\$4,820	\$13,376	\$4,013						\$967	\$290	\$51,815	\$129,004																				
	Oct-02	\$20,500	\$3,764	\$5,503	\$1,535	\$2,594	\$441	\$8,130	\$2,268		\$500	\$201	\$21,171	\$150,175																				
> U L	Nov-02							\$6,070	\$1,730			\$803	\$241	\$35,708	\$185,884																			
	Dec-02							\$5,538	\$1,816			\$857	\$111	\$16,810	\$202,694																			
	Jan-03							\$1,562	\$484			\$679	\$124	\$10,849	\$213,543																			
	Feb-03							\$12,000	\$3,720			\$5,608	\$1,738	\$836	\$110	\$24,012	\$237,555																	
> U L	Mar-03							\$16,015	\$5,125			\$2,800	\$896	\$836	\$291	\$25,063	\$263,519																	
	Apr-03							\$9,372	\$2,999			\$1,846	\$591	\$1,233	\$63	\$16,104	\$279,622	\$92,204																
	May-03							\$14,444	\$4,333			\$9,230	\$2,769	\$1,018	\$266	\$32,060	\$311,682	\$331,522																
	Jun-03							\$10,781	\$3,234			\$12,354	\$3,706	\$909	\$155	\$31,139	\$342,821	\$320,000	\$80,240															
> U L	Jul-03							\$10,773	\$3,232			\$14,000	\$4,200	\$255	\$77	\$32,537	\$375,358	\$109,886																
	Aug-03							\$6,223	\$1,867			\$19,525	\$5,858	\$1,231	\$209	\$34,913	\$410,271	\$253,407																
	Sep-03							\$5,933	\$1,780			\$32,376	\$9,713	\$1,177	\$354	\$51,332	\$461,603	\$104,898																
	Oct-03					\$139	\$24	\$2,920	\$876			\$12,921	\$3,876	\$1,596	\$271	\$64,220	\$494,228	\$119,114																
> U L	Nov-03							\$12,038	\$3,611			\$15,987	\$4,796	\$791	\$135	\$21,589	\$390,529																	
	Dec-03							\$8,361	\$2,508			\$10,957	\$3,287	\$1,081	\$371	\$26,564	\$548,148	\$231,536																
	Jan-04							\$5,497	\$1,649			\$9,417	\$2,825	\$0	\$0	\$19,388	\$567,536	\$262,259																
	Feb-04							\$12,124	\$3,637			\$14,892	\$4,468	\$182	\$31	\$35,334	\$602,870	\$0																
> U L	Mar-04							\$9,655	\$2,896			\$10,658	\$3,197	\$0		\$26,406	\$629,276	\$0																
	Apr-04															\$0	\$602,870	\$0																
TOTALS		\$90,133	\$15,601	\$40,127	\$11,575	\$3,037	\$516	\$157,434	\$47,767	\$187,091	\$56,488	\$15,918	\$3,590				\$2,215,355	\$80,240	\$20,000	\$0	\$20,897	\$3,845	\$20,357	\$3,746	\$28,655	\$4,585	\$0	\$0	\$6,330	\$1,013	\$39,087	\$6,746	\$33,154	\$5,724

WBS 1.2 Escalation and Contingency

Total for WBS 1.2 = \$676,280
Total Direct and G&A (above)= \$629,276
Project Support Escalation = \$0
Project Support Contingency = \$47,004 Not Accurate, Reflects unused portions of Direct and Indirect Costs

WBS 1.1 Escalation and Contingency

Total for WBS 1.1 = \$3,133,720
Total Direct and G&A (above)= \$2,489,733
Project Support Escalation = \$0
Construction Contingency = \$643,987 Not Accurate, Reflects unused portions of Direct and Indirect Costs

*Total Indirect= \$135,537
Total Direct = \$493,739

Note: 1. G&A distribution by month is approximate
2. Text in italics includes costs from Hanson Engineers PO 550107 as support of FESS/Engr in house efforts.

TPC	
Monthly Totals	Cumulative Totals
\$11,345	\$11,345
\$65,844	\$77,189
\$51,815	\$129,004
\$0	\$150,175
\$0	\$185,884
\$16,810	\$202,694
\$23,157	\$225,852
\$12,309	\$12,309
\$12,355	\$24,664
\$78	\$24,742
\$116,307	\$141,049
\$331,522	\$472,571
\$363,583	\$784,253
\$431,379	\$1,215,632
\$110,419	\$983,230
\$271,392	\$1,254,622
*** \$369	
*** \$15,372	
\$23,346	
\$3,969	
\$12,803	
\$20,351	
\$3,548	
\$147,192	\$1,401,815
\$163,013	\$1,564,827
\$390,529	\$1,955,356
\$231,536	\$2,186,892
\$262,259	\$2,449,151
\$20,877	\$2,470,028
\$19,707	\$2,489,735
\$0	\$2,489,735

PAYOUT SUMMARY									
Payout #	Payout Date amount	PAYMENT MILESTONE	Completion DATE	Actual Comp DATE	AMOUNT	CUMULATIVE TOTAL PAYOUT	RETENTION 10% RETENTION	CUMULATIVE 10% RETENTION	% OF CONTRACT COMPLETE
Payout #1	6/12/2003 \$399,141	1A	05/02/03	5/5/2003	\$118,384.00	\$118,384.00	\$11,838.40	\$11,838.40	14%
		1B	06/18/03	6/10/2003	\$280,757.00	\$399,141.00	\$28,075.70	\$39,914.10	
Payout #2	7/1/2003 \$361,749	1C	06/25/03	6/15/2003	\$210,313.00	\$609,454.00	\$21,031.30	\$60,945.40	
		1D	06/27/03	6/27/2003	\$106,112.00	\$715,566.00	\$10,611.20	\$71,556.60	
		1E	07/25/03	7/1/2003	\$45,324.00	\$760,890.00	\$4,532.40	\$76,089.00	28%
Payout #3	8/13/2003 \$180,404	1F	08/08/03	7/18/2003	\$89,708.00	\$850,598.00	\$8,970.80	\$85,059.80	
		1G	08/05/03	8/5/2003	\$87,682.00	\$938,280.00	\$8,768.20	\$93,828.00	
		1J	07/24/03	7/10/2003	\$3,014.00	\$941,294.00	\$301.40	\$94,129.40	34%
Payout #4	9/3/2004 \$165,725	1H	08/28/03	8/18/2003	\$88,043.00	\$1,029,337.00	\$8,804.30	\$102,933.70	
		1I	09/08/03	8/28/2003	\$77,682.00	\$1,107,019.00	\$7,768.20	\$110,701.90	40%
Payout #5	10/20/2003 \$174,042	1K	09/25/03	9/8/2003	\$37,558.00	\$1,144,577.00	\$3,755.80	\$114,457.70	
		5A	10/02/03	9/28/2003	\$67,340.00	\$1,211,917.00	\$6,734.00	\$121,191.70	
		5B	10/28/03	10/20/2003	\$69,144.00	\$1,281,061.00	\$6,914.40	\$128,106.10	46%
Payout #6	11/21/2003 \$460,499	2A	10/31/03	10/31/03	\$60,617.00	\$1,341,678.00	\$6,061.70	\$134,167.80	
		2B	11/14/03	11/14/03	\$68,843.00	\$1,410,521.00	\$6,884.30	\$141,052.10	
		2C	11/19/03	11/19/03	\$26,363.00	\$1,436,884.00	\$2,636.30	\$143,688.40	
		2E	12/21/03	12/21/03	\$184,659.00	\$1,621,543.00	\$18,465.90	\$162,154.30	
		2H	11/10/04	11/10/04	\$46,172.00	\$1,667,715.00	\$4,617.20	\$166,771.50	
		3A	11/17/03	11/10/04	\$73,845.00	\$1,741,560.00	\$7,384.50	\$174,156.00	63%
Payout #7	12/31/2003 \$231,536	2F	12/31/03	12/31/2003	\$107,648.00	\$1,849,208.00	\$10,764.80	\$184,920.80	
		2I	12/31/03	12/31/2003	\$103,663.00	\$1,952,871.00	\$10,366.30	\$195,287.10	
		3D	12/16/03	12/23/2003	\$20,225.00	\$1,973,096.00	\$2,022.50	\$197,309.60	71%
Payout #8	1/30/2004 \$262,259	2G	12/31/03	1/6/2004	\$25,812.00	\$1,998,908.00	\$1,290.60	\$99,945.40	Reduced Retention to 5%
		3B	02/02/04	1/30/2004	\$187,560.00	\$2,186,468.00	\$9,378.00	\$109,323.40	
		4B	02/23/04	1/30/2004	\$48,887.00	\$2,235,355.00	\$2,444.35	\$111,767.75	81%
Payout #9	4/19/2004 \$447,592	2D	11/20/03	4/14/2004	\$9,850.00	\$2,245,205.00	\$492.50	\$112,260.25	
		3C	03/02/04	3/2/2004	\$21,178.00	\$2,266,383.00	\$1,058.90	\$113,319.15	
		3E	03/02/04	3/15/2004	\$21,166.00	\$2,287,549.00	\$1,058.30	\$114,377.45	
		3F	03/02/04	4/19/2004	\$259,645.00	\$2,547,194.00	\$12,982.25	\$127,359.70	
		4C	03/25/04	3/25/2004	\$84,375.00	\$2,631,569.00	\$4,218.75	\$131,578.45	
		4E	03/25/04	3/25/2004	\$10,727.00	\$2,642,296.00	\$536.35	\$132,114.80	
		6A	04/09/04	4/9/2004	\$40,651.00	\$2,682,947.00	\$2,032.55	\$134,147.35	97%
		4A	03/25/04		\$8,530.00				
		4D	03/25/04		\$15,016.00				
		6B	04/21/04		\$20,800.00				
		7	05/06/04		\$35,000.00				
					\$2,762,293.00				

BCWS
MI-31 Anticipated Spending Profile
WBS 1.1 and 1.2

	Title Source Type	WBS 1.2 Project Support												WBS 1.1 Construction																					
		ED&I						A						Subcontract	Subcontract	Subcontract	Subcontract	Switch conduit	Switch conduit	Transformer Purchase	Transformer Purchase	Cable Tray	Cable TrayCabling	Cabling	Chiller	Chiller	Shielding Steel	Steel Fab	Shielding Steel	Inst. Shielding Steel	Inst. Shielding Steel				
		T2 Hanson Direct	T2 Hanson G&A	T2 FESS Chargeback	T2 FESS G&A	T3 FESS M&S	T3 FESS Chargeback	T3 FESS G&A	T3 FESS Chargeback	T3 FESS G&A	T3 PM Salary TX	T3 PM G&A	Monthly Totals	Cumulative Totals	T3 Whittaker Direct**	T3 Whittaker G&A	T3 Whittaker Incentive	T3 Whittaker G&A	T3 T&M Direct	T3 T&M G&A	T3 Procurement Direct	T3 Procurement G&A	T3 T&M Direct	T3 T&M G&A	T3 T&M Direct	T3 T&M G&A	T3 Procurement Direct	T3 Procurement G&A	T3 T&M Direct	T3 T&M G&A	T3 T&M Direct	T3 T&M G&A	Monthly Totals	Cumulative Totals	
F Y O 2	Mo-Yr																																		
	Jul-02	\$25,000	\$4,250	\$10,000	\$3,000	\$300	\$51					\$42,601	\$42,601																			\$0	\$0		
	Aug-02	\$20,000	\$3,400	\$10,000	\$3,000					\$1,000	\$300	\$37,700	\$80,301																			\$0	\$0		
	Sep-02	\$24,587	\$4,180	\$11,800	\$3,540					\$1,000	\$300	\$45,407	\$125,708																			\$0	\$0		
F Y O 3	Oct-02			\$10,000	\$3,000	\$300	\$51					\$3,000	\$900	\$1,000	\$300	\$18,551	\$144,259																\$0	\$0	
	Nov-02	\$20,500	\$3,485	\$10,000	\$3,000							\$3,000	\$900	\$1,000	\$300	\$42,185	\$186,444																\$0	\$0	
	Dec-02											\$3,000	\$900	\$1,000	\$300	\$7,800	\$194,244																\$0	\$0	
	Jan-03											\$3,000	\$900	\$1,000	\$300	\$7,800	\$202,044																\$0	\$0	
	Feb-03											\$3,000	\$900	\$1,000	\$300	\$7,800	\$209,844																\$24,742	\$24,742	
	Mar-03					\$200	\$34	\$12,000	\$3,720	\$11,000	\$3,410	\$1,000	\$300	\$31,664	\$241,508	\$0		\$20,897	\$3,845	\$20,357	\$3,746												\$24,103	\$48,845	
	Apr-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$274,048	\$92,204																	\$0	\$48,845	
	May-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$306,588	\$330,958																	\$92,204	\$141,049	
	Jun-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$339,128	\$292,404	\$80,240																	\$330,958	\$472,007
	Jul-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$371,668	\$136,381																		\$372,644	\$844,651
	Aug-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$404,208	\$177,390																		\$136,381	\$981,032
F Y O 4	Sep-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$436,748	\$162,580																		\$177,390	\$1,158,422
	Oct-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$469,288	\$288,714																		\$228,413	\$1,386,835
	Nov-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$501,828	\$254,716																		\$327,592	\$1,714,427
	Dec-03							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$534,368	\$253,411																		\$254,716	\$1,969,143
	Jan-04							\$12,000	\$3,720	\$12,000	\$3,720	\$900	\$200	\$32,540	\$566,908	\$11,441																		\$534,368	\$2,222,554
	Feb-04							\$8,000	\$2,480	\$8,000	\$2,480	\$900	\$200	\$22,060	\$588,968	\$455,329																		\$11,441	\$2,233,995
	Mar-04							\$4,000	\$1,240	\$4,000	\$1,240	\$450	\$200	\$11,130	\$600,098	\$182,756																		\$476,205	\$2,710,200
	Apr-04							\$1,000	\$310	\$12,000	\$3,720	\$450	\$200	\$17,680	\$606,648	\$104,009																		\$202,462	\$2,912,662
TOTALS		\$90,087	\$15,315	\$51,800	\$15,540	\$800	\$136	\$151,000	\$46,750	\$170,000	\$52,550	\$18,800	\$5,000				\$2,742,293	\$80,240	\$20,000	\$0	\$20,897	\$3,845	\$20,357	\$3,746	\$28,655	\$4,585	\$10,000	\$1,600	\$31,000	\$2,613	\$39,087	\$6,746	\$33,154	\$5,724	\$3,672,319

WBS 1.2 Escalation and Contingency

Total for WBS 1.2 =	\$676,280
Total Direct and G&A (above)=	\$617,778 *
Project Support Escalation =	\$0
Project Support Contingency =	\$58,502 12%

* Total Indirect=	\$135,291
Total Direct =	\$482,487

Includes SA 1 through 8

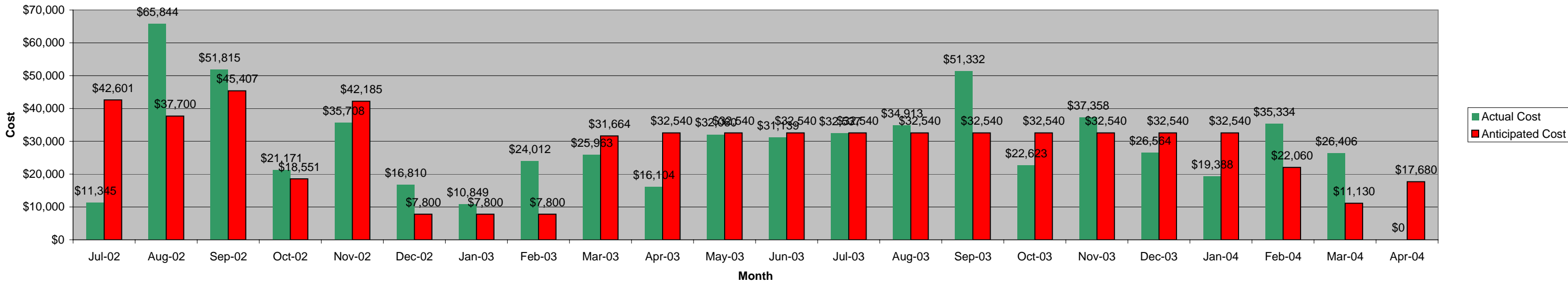
WBS 1.1 Escalation and Contingency

Total for WBS 1.10 =	\$3,133,720
Total Direct and G&A (above)=	\$3,054,541 *
Project Support Escalation =	\$0
Construction Contingency =	\$79,179 3%

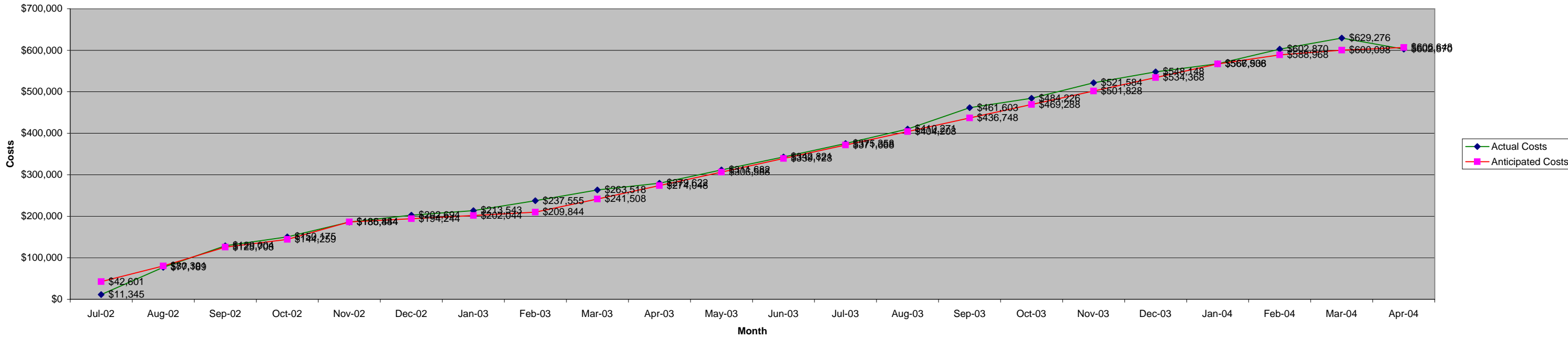
* Total Indirect=	\$109,099
Total Direct =	\$2,945,443

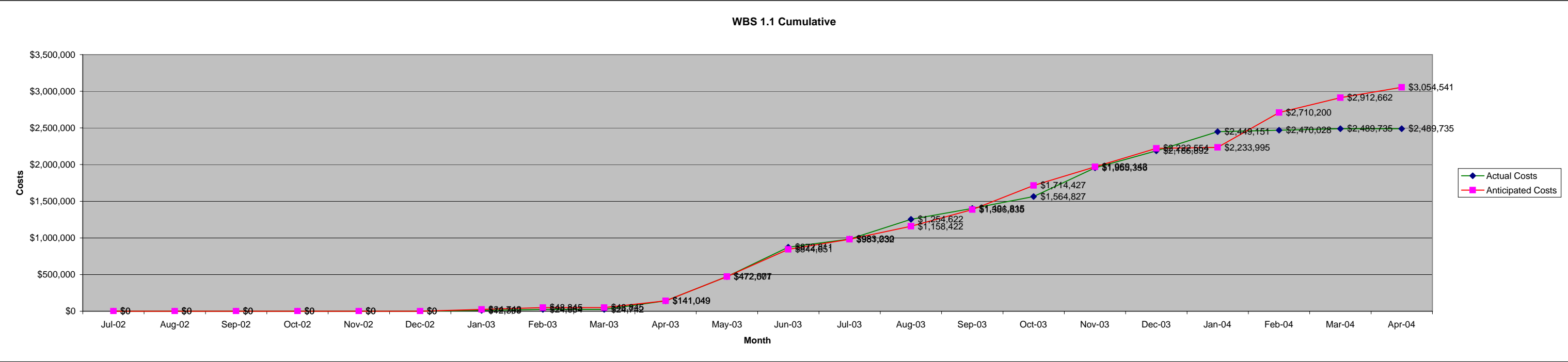
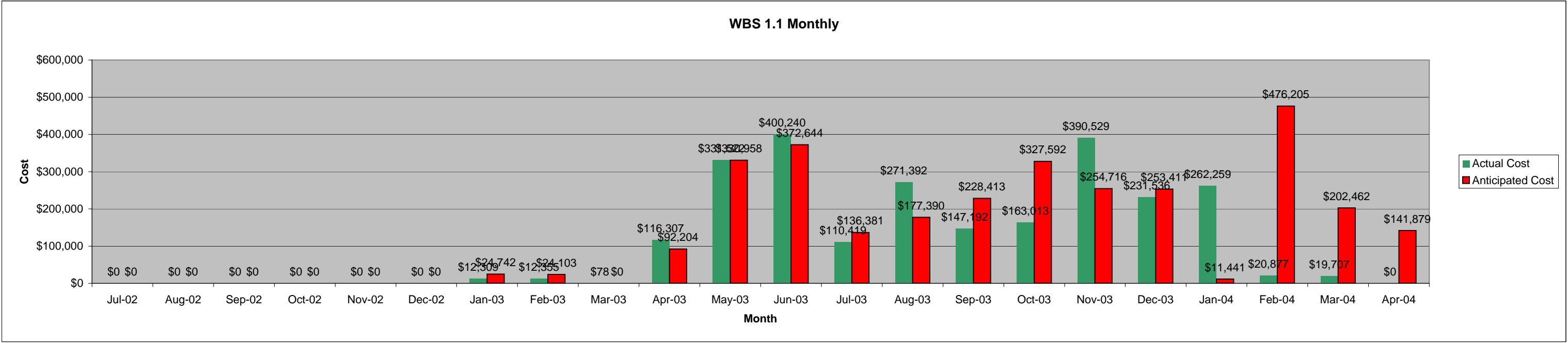
** NOTE BUDGETED COST OF WORK SCHEDULED IS BASED ON WHITTAKERS
LATEST T3 COST LOADED SCHEDULE.

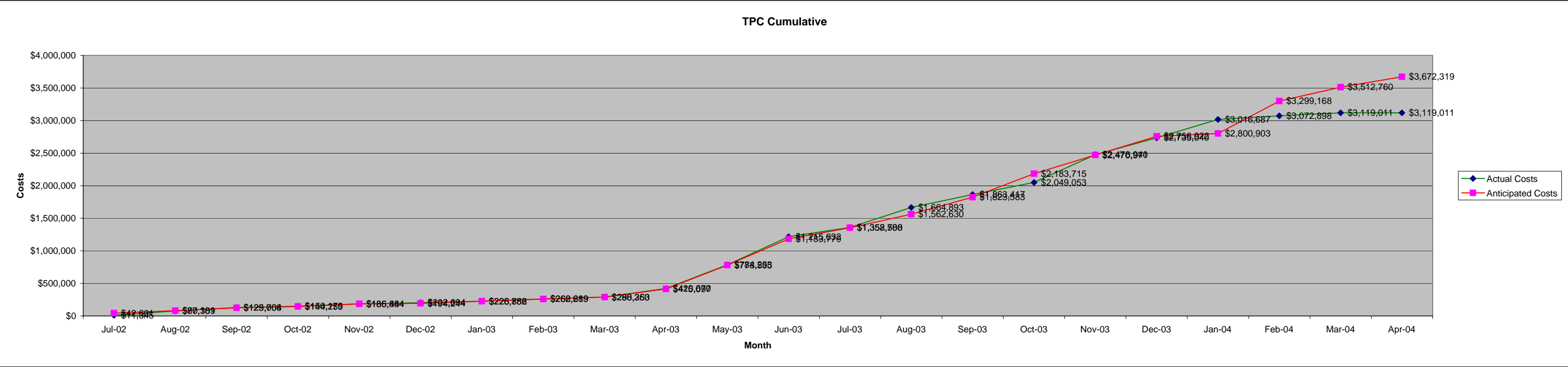
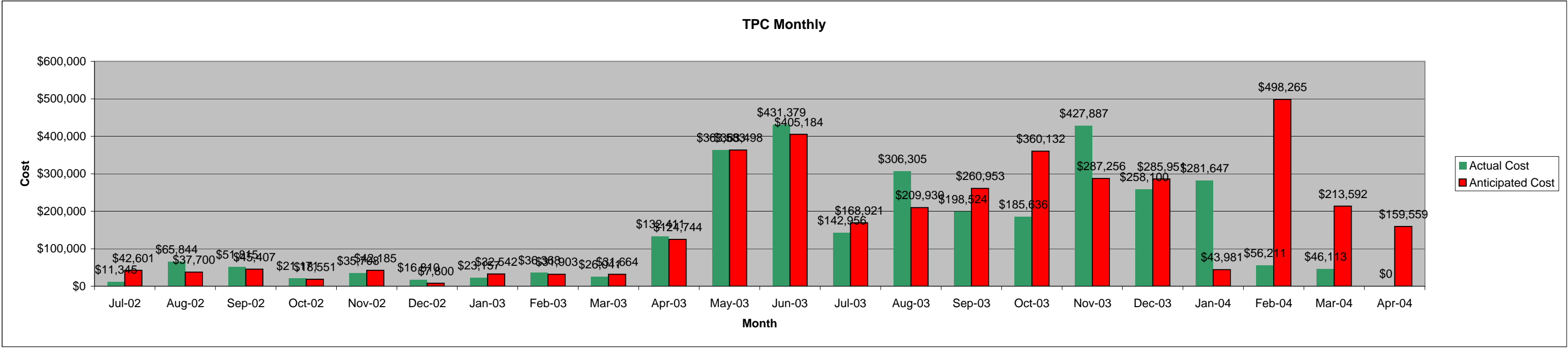
WBS 1.2 Monthly



WBS 1.2 Cumulative







MI-31 ECP LIST

ECP #	Description	Date Issued from CMO	Anticipated Credit, Extra or No Cost	Associated Sketch Number	Actual Credit, Extra or No Cost	Associated Payment Milestone	Overall Schedule Impact In Davs	Whittaker Proposal Date	Accepted/ Rejected or Pending	Req. #	Req. Approval Date	SA #	Date Work Complete	Comments
1	Holeless elevator instead of single cylinder elevator and add pit ladder	3/12/2003	Extra - \$5000	SK-1...	\$19,390	3a	0	4/17/2003	Accepted	163820	5/6/2003	2		
1a	Full width doors on elevator	3/12/2003	Extra - \$3000	SK-1...	\$3,080	3a	0	4/17/2003	Accepted	163822	5/6/2003	2		
2	Watermain valve clarifications/ modifications and installation of flushing hydrants.	3/12/2003	No Cost	SK-2	\$1,665	1e	1	3/19/2003	Accepted	163549	4/15/2003	1	7/15/2003	
3	Reduce shut down schedule from 6 weeks to 5 weeks VOID	3/12/2003	NA	None	\$0	5a	0	3/28/2003	Rejected					<u>Void</u>
4	Earth retention changes – including bottom of soldier piles to elevation 698 and shielding distance of 18.4 feet.	3/12/2003	No Cost	SK-4	\$0	1b	1	3/28/2003	Accepted	---	4/4/2003	1	4/30/2003	
5	Temporary Bulkhead Door	3/21/2003	Extra - \$7000	SK-5	\$10,231	5a	1	4/14/2003	Accepted	163802	4/25/2003	1	9/11/2003	
6	Modifications to MI Ducts	6/26/2003	Extra – \$30,000	SK-6	\$46,117	5a	5	7/21/2003	Accepted	165776	8/1/2003	4	10/15/2003	
7	Install 6 Atlas Piles at MI-30	From Sub	Extra - \$25,000	See Excavation Plan	\$26,180	1a	3	3/28/2003	Accepted	163420	5/1/2003	1	5/7/2003	Rush Requisition, added because excavation plan required supporting building. Approval by CCB required
8	Credit for Wall Panel Coating change – three coat system to two coat system	4/22/2003	Credit – \$3,500	None	-\$3,500	2h	0	4/25/2003	Accepted	--	4/25/2003	2		
9	Credit for substitute damp proofing product	4/22/2003	Credit- \$7,000	None	-\$7,500	1i	0	4/25/2003	Accepted	--	4/25/2003	2	10/15/2003	
10	Temporary Work Platform on MI-30	5/5/2003	Extra - \$3500	Page 1 of 1	\$4,610	1b	1	5/14/2003	Accepted	164321	5/19/2003	3	6/1/2003	Field Directed on 5/15/03 - Required for maintenance of MI-30 HVAC units
11	Relocation of Building Sump	6/10/2003	No Cost	SK ECP-10	\$0	1d	0	6/24/2003	Accepted	--		4	6/7/2003	
12	Rad. Detector Platform/ Relocation	From Sub	-	None	\$733		0	6/19/2003	Accepted	165153	6/27/2003	4	6/14/2003	Field Directed , noted incorrectly in the requisition as ECP 11. Time and Material.
13	Extra for Concrete Mix Design 71	From Sub	\$7,300	None	\$5,625	1k	0	9/12/2003	Accepted	165389	7/14/2003	5	8/29/2003	See letter from Mike Botts on 6/25/03
14	Connecting Enclosure Mods	7/28/2003	\$1,500	SK-14	\$1,755	5b	0	9/2/2003	Accepted	166707	9/9/2003	5	9/30/2003	
15	Credit for PVC in leiu of Rigid Conduit for ducts on sheet E-6	From Sub	(\$10,000)	None	-\$10,000	5b	0	9/2/2003	Accepted			6	11/7/2003	
16	Topsoil for MI Stockpile	9/12/2003	\$10,000	None	\$4,368	1	0		Accepted	167479	10/21/2003	8?	12/31/2003	Based on per load cost
17	Painting of Cast In Place Walls in Lieu of Concrete Sealer	9/12/2003	\$2,500	None	\$3,362	1	3		Accepted	167479	10/21/2003	6		
18	Time extension for Shielding Steel Placement	From Sub	\$0	None	\$0	5	6		Accepted	--	--	6	NA	
19	Mezzanine	10/22/2003	\$48,000	Several	\$53,127	3	16		Accepted	168753	12/17/2003	7		
20	Bonus for completing MS 5b on time	NA	\$20,000	NA	\$20,000	5b	0	NA	Accepted	167810	10/28/2003	6	11/3/2003	
21	Electrical modifications for Equip. Lift	11/3/2003	\$1,500	SK-21a,b	\$2,890	3	1		Accepted	168516	12/1/2003	7		
22	Add two 600 amp breakers into the 750 kva transformer	From Sub	-	NA	\$8,771	3	0	11/4/2003	Accepted	168124	11/13/2003	7	11/25/2003	
23	Credit for change from 750 mcm to 10 cable	From Sub	(\$850)	NA	-\$850	3			Accepted	--	--	7	11/19/2003	
24	Miscellaneous Field Directed Changes	From Sub	\$1,300	NA	\$1,248	3	0	11/26/2003	Accepted	168657	12/8/2003	7	11/11/2003	Field Directed - Move SF6 footing, Waterproof Conn Enc.
25	Pelletron Support	2/4/2004	\$41,000	ECP-25	\$40,651	4	15	2/17/2004	Accepted	170123	2/24/2004	8		
26	Control Room Ceiling Revision	2/5/2004	\$2,000	ECP-26	\$2,130	6	1	3/5/2004	Accepted	170512	3/9/2004	8		
27	Electrical revisions for Chiller and Condenser	3/1/2004	\$12,000	Revised E sheets, 4, 6, 7,10,11	\$7,944	6	5	3/15/2004	Pending			9?		
28	Truck Dock Safety Modifications	3/1/2004	\$3,000	Revised A-2	\$0	6			Rejected					
29	Miscellaneous Field Directed Changes #2	From Sub	\$1,060	NA	\$1,060	4	0	2/23/2004	Accepted	170448	3/5/2004	8		Door Lite, shield block move, window frame steel
30	Cable Tray Installation	From Sub		NA	\$6,735	7	0	3/31/2004	Accepted	171176	4/6/2004	9?	4/12/2004	
	TOTAL				\$249,822				`					

Note: Changes above colored in blue indicate added scope and bonus related extras.
All other changes are either unforeseen conditions or plan errors.

Original Subcontract Amount = \$2,527,150
Total Added Scope/Bonus = \$216,100
Total Unforeseen/ Errors = \$33,722
Subcontract amount to date = \$2,776,972

9% change from original subcontract amount includes bonus
1% change from original subcontract amount